

UK Pharmacy Students' Opinions on Mental Health Conditions

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Title Page (manuscript for consideration in the ‘Research Brief’ category, not ‘Research article’.)

Title: A Questionnaire Study Investigating Future Pharmacists’ Opinions on Mental Health Conditions

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Abstract

Objective: Given the increased emphasis on mental health awareness recently, this study aimed to ascertain future pharmacists' opinions on mental health conditions (and investigate the influence of gender), since they would soon be advising patients about this in their capacity as healthcare professionals.

Methods: Following ethical approval and piloting, all final year Master of Pharmacy students at Queen's University Belfast were invited to complete a paper-based questionnaire during a compulsory class. Section A was an adapted version of a United Kingdom (UK) public opinion questionnaire on mental health ('Attitudes to Mental Illness'), largely consisting of rating questions. Section B gathered non-identifiable demographic data. Descriptive statistics were undertaken; Mann-Whitney U test and Chi-square test were used for gender comparisons with significance set at $p < 0.05$.

Results: An 89% (97/109) response rate was obtained. Most considered that pharmacological and non-pharmacological measures were beneficial in the management of mental health conditions (89% and 96%, respectively) and that people with mental illness had the same rights to jobs as anyone else (82%). However, only 57% of student respondents felt confident discussing mental health issues with patients and 36% deemed university training to be satisfactory. Males were more likely than females to 'agree strongly' or 'agree slightly' that they would not want to live next door to someone who has been mentally ill' ($p = 0.01$).

Conclusion: While some positive opinions were evident, more work is needed to prepare these future pharmacists for roles within mental health care teams.

INTRODUCTION

The National Institute for Health and Care Excellence (NICE) states that common mental health disorders such as depression, generalized anxiety disorder, panic disorder, obsessive-compulsive disorder, post-traumatic stress disorder and social anxiety disorder, may affect up to 15% of the United Kingdom (UK) population.¹ According to the National Institute of Mental Health (NIMH), the prevalence of adults in the United States of America (USA) with any mental illness is 17.9% (2015 data).² However, as many individuals do not necessarily seek medical help, mental health conditions can be undiagnosed and underreported. Although some mental health problems may be self-limiting or respond to self-care measures,³ when an individual delays or avoids medical care, serious consequences can arise.⁴⁻⁶ While the severity of individual mental health disorders varies, all can be associated with significant long-term concerns. For example, depression is associated with significant morbidity and mortality and is the most common disorder contributing to suicide.¹

Research investigating attitudes towards mental illness has been conducted at population levels among the general public (such as in Australia,⁷ UK⁸ and USA⁹) and media campaigns strive to raise awareness and aim to dispel myths.¹⁰ Work has also been conducted to investigate various university students' mental health¹¹⁻¹³ and their attitudes towards mental illnesses (involving medical,^{14,15} nursing¹⁶ and pharmacy students¹⁷⁻²²). Unfortunately, views held by future healthcare professionals towards mental illness have not always been appropriate. For example, Bell and colleagues' questionnaire study conducted in six different countries (Australia, Belgium, Estonia, Finland, India and Latvia) revealed that pharmacy students' attitudes towards people with mental health illnesses (schizophrenia and severe depression) was sub-optimal.¹⁸

The aim was to investigate Queen's University Belfast (QUB) Level 4 (ie the final year of the degree program) pharmacy students' opinions on mental health. Specifically, the objectives were investigate their attitudes towards mental health conditions and determine whether gender affected responses.

To the best of the authors' knowledge, there has been limited work in this area involving pharmacy students particularly in the UK and no work specifically conducted in Northern Ireland. This research adds to the existing body of literature by providing useful baseline data from a UK context. Moreover, it is important to ascertain pharmacy students' opinions on mental health conditions, given that they will be advising and counselling patients about this important clinical subject area in their capacity as a healthcare professional (and since the number of people affected by mental health conditions continues to grow¹). Importantly, it is anticipated that the findings of this research will inform future teaching of the subject matter. From a pharmacy education standpoint, "developing a clinical knowledge base that culminates in the demonstrated ability of learners to apply knowledge to practice" and preparing students "to provide patient-centered collaborative care" are stipulations in the Accreditation Council for Pharmacy Education (ACPE) Accreditation standards and Key Elements for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree.²³ These are also reiterated in the UK Master of Pharmacy (MPharm) accreditation standards.²⁴

METHODS

Ethical approval for this work was obtained from the School of Pharmacy Ethics Committee at QUB (Ref 025PMY2016; Nov 22, 2016). All Level 4 (final year) MPharm students at QUB were invited to participate in the study. The inclusion criterion was that the study participants had to be currently enrolled Level 4 students. Level 4 students were selected because they had been taught about mental health conditions prior to conducting the research (unlike the other year groups) and also because they were soon to graduate from university and begin their career in pharmacy practice. Data were collected by means of a paper-based self-completed questionnaire. The questionnaire was developed with reference to the wider literature⁷⁻¹⁸ and consisted of two sections. Section A was an adapted version of the 'Attitudes to Mental Illness' UK public opinion questionnaire,⁸ consisting of many attitudinal statements measured using a five-point Likert scale (Agree strongly/Agree slightly/Neither agree nor disagree/Disagree slightly/Disagree strongly) and, on occasion, a seven-point scale (Very uncomfortable to Very comfortable). The Attitudes to Mental Illness questionnaire was developed and funded by the Department of Health and includes items from the 'Community

Attitudes toward the Mentally Ill (CAMI)' scale and the 'Opinions about Mental Illness' scale.⁸ Further statements were included about confidence counselling patients on mental illness and training provision within the degree program. Section B related to demographic information and gathered non-identifiable data only.

To maximize response rates, the questions were largely in a close-ended question format.²⁵ The questionnaire was piloted with ten pharmacist postgraduate students at the School in November 2016. As a result, one minor modification was made (wording was amended for one question to clarify that respondents could select as many options as they wished).

Questionnaire distribution took place during Semester 1 (in December 2016) in a compulsory class. In January 2017, the responses from the completed questionnaires were coded and entered into a customized database developed on IBM SPSS v22 (SPSS Inc., Chicago, IL) for statistical analysis. Data analysis largely took the form of descriptive statistics. Interpolated median scores were calculated on the rating questions. Comparisons were done between gender responses as previous work revealed differences in opinions.^{12,14} Mann-Whitney U test and Chi-square test were used for gender comparisons with significance set at $P < 0.05$ a priori. The Mann-Whitney U test was performed on the data that was ordinal in nature whereas the Chi-square test was performed on the data that was categorical (nominal) in nature.

RESULTS

A response rate of 89% (97/109) was obtained; 40% (39/97) were males and 60% (58/97) females. Mean age of the year group was 22.8 years. Before commencing the MPharm degree program at QUB, the majority of students had received their education in the UK and Ireland (83%, 80/97) with some from Asia (10%, 10/97). Others (7%, 7/97) did not disclose this information.

Students were asked about the person closest to them who has/had some kind of mental illness. They were instructed to select one option from a list. The results to this question are outlined below, with the top three most popular selections being: a friend, no one known, and immediate family.

- Friend (24/97; 25%)
- No-one known (23/97; 24%)
- Immediate family (spouse\child\sister\brother\parent) (18/97; 19%)
- Other family (uncle\ aunt\cousin\grandparent etc.) (12/97; 12%)
- Acquaintance or work colleague (6/97; 6%)
- Self (5/97; 5%)
- Partner (4/97; 4%)
- Other (5/97; 5%)

In relation to the hypothetical statement about how likely they would be to go to a doctor for help if they felt they had a mental health problem, responses were: 13/97 (13%) ‘very likely’, 43/97 (44%) ‘quite likely’, 13/97 (13%) ‘neither likely nor unlikely’, 22/97 (23%) ‘quite unlikely’ and 6/97 (6%) ‘very unlikely’. The interpolated median was 3.7 (5 equated to ‘very likely’ to 1 for ‘very unlikely’).

In another hypothetical statement, students were asked to rate how comfortable they would feel talking to a friend or family member about their mental health. For example, telling a friend or family member that they (the student) had a mental health diagnosis and how it affected them. Respondents had to rate their answer from 1 (very uncomfortable) through to 7 (very comfortable). The interpolated median for this statement (n=97 respondents) was 4.4. Similarly (and using the same scale), students had to rate how comfortable they would feel talking to a current or prospective employer about their mental health. The interpolated median for this statement (n=97 respondents) was 2.1.

Regarding statements about future relationships, students had to indicate their level of agreement [1 (‘disagree strongly’) to 5 (‘agree strongly’)]. The interpolated medians for each are: I would be

1 willing to continue a relationship with a friend who developed a mental health problem (4.9), to live
2 with someone with a mental health problem (4.5) and to work with someone with a mental health
3 problem (4.7).

4
5 When asked about the number of people in the UK who have a mental health problem at some point
6 in their lives, only 35/97 (36%) respondents selected the correct answer (1 in 4 people). Furthermore,
7 students had to indicate their level of agreement [1 ('disagree strongly') to 5 ('agree strongly')] about
8 various conditions such as stress, grief, depression and drug addiction being types of mental health
9 conditions. The results for this question as presented in Figure 1. Moreover, 23/97 (24%) thought a
10 person was mentally ill if they were incapable of making simple decisions about his/her life and 34/97
11 (35%) thought a mentally ill person could not be held responsible for his/her own actions.

12
13 Other attitudinal statements on mental health conditions and corresponding results are provided in
14 Table 1. While the majority (93%) considered that virtually anyone could become mentally ill, about
15 one fifth of respondents (22%) thought there was something about people with mental illness that
16 made it easy to tell them apart from 'normal' people. Positive opinions were held by most with regard
17 to people with mental illness having the same rights to jobs as anyone else (82%) and not being
18 excluded from holding public office positions (74%). Most thought that pharmacological and non-
19 pharmacological measures were beneficial in the management of mental health conditions (89% and
20 96%, respectively) and that services should typically be provided via community-based facilities
21 where possible (86%). However, just over half (57%) felt confident talking about mental illness with
22 patients and only 36% felt that their university training was adequate. About 6 out of every 10
23 respondents knew what advice to give a friend with a mental health problem so that they could get
24 professional help. Moreover, in relation to the statement 'I would not want to live next door to
25 someone who has been mentally ill', males were more likely than females to 'agree strongly' or
26 'agree slightly' [8/39 (21%) versus 6/58 (10%), $p=0.01$]. However, given the small numbers involved,
27 this result should be interpreted with caution. Females were more likely to 'disagree strongly' or

1 'disagree slightly' that people with mental health problems should be excluded from taking public
2 office [48/58 (83%) versus 23/38 (61%), $p=0.01$].

3 Lastly, when asked about whether people with mental illness experienced stigma and discrimination
4 nowadays because of mental health problems, 51/97 (53%) selected 'yes, a lot', 46/97 (47%) selected
5 'yes, a little' and no one selected 'no'.

7 **DISCUSSION**

8 Unlike other research,^{12,14} gender played a limited role in this current study as there were few
9 significant differences between male and female responses. Only a small percentage (5%) of students
10 reported having a mental illness which is a much lower prevalence than that previously reported in the
11 literature, for example, by Goodwin and colleagues¹¹ for first year undergraduate university students,
12 Alfaris and colleagues¹² for health professions' university students (and in particular female students)
13 and Payakachat¹³ and Panthee¹⁹ and colleagues for pharmacy students. Thankfully the majority of
14 respondents suggested they would be comfortable talking to friends and family about a mental health
15 condition (if applicable), although over 40% appeared reluctant to seek medical help from a doctor.
16 Moreover, the majority of respondents disagreed that most people with mental health problems go to a
17 healthcare professional to get help. In the UK, the doctor is a key medication provider in primary care
18 and a gateway to other mental health services. Similarly, previous work by Reavley and colleagues²⁶
19 in Australia revealed that 16-24 year olds were less likely to seek help for mental health issues than
20 middle-aged or older adults. Furthermore, Downs and Eisenberg²⁷ concluded that people who need
21 professional support the most are actually the least likely to source it. Ultimately, pharmacy educators
22 cannot assume that students pursuing healthcare degrees are looking after their own health adequately.
23 We found this previously in relation to alcohol intake: the mean intake of alcohol was 18.3 units per
24 week (exceeding the recommended UK amount) with around 70% of pharmacy students reporting
25 binge drinking on at least one day of the week.²⁸ In QUB School of Pharmacy, a 'mental health first
26 aid' scheme has just been launched whereby a cohort of students across the year groups are trained to
27 spot warning signs of mental health issues among their peers and signpost them to appropriate sources
28 of help. It would be useful to evaluate the impact of this and conduct further research to ascertain

types of professional support that students do, or would consider accessing, in relation to mental health issues, and barriers towards seeking help.

In this current study, respondents did not appear particularly comfortable talking about personal mental health issues with employers. The score was much greater in relation to friends and family. It is difficult to draw meaningful conclusions in relation to this as people are probably less likely to talk to employers (than family and friends) about personal issues anyway. However, it could be related to concerns about stigma and discrimination since all students also thought stigma and discrimination associated with mental illness exists today and most considered that we (society) should adopt a far more tolerant attitude toward people with mental illness. Northern Ireland may be slower to adopt appropriate attitudes towards mental health than other countries. For example, a public awareness campaign rolled out across various parts of Europe by Kohls and colleagues²⁹ gleaned less positive results in Ireland compared with Germany and Portugal. That being said, many of our students' attitudes towards mental health in this current study were positive and appropriate, unlike that previously reported by Bell and colleagues about pharmacy students.¹⁸ The majority of the students in this current study thought that people with mental health problems should have the same rights to a job as anyone else (including being given responsibility and public office positions), and seemed fine with the concept of living next door and having future relationships with people who had mental health problems.

With reference to the training provided and knowledge of the subject area, many student respondents correctly thought that virtually anyone could become mentally ill and all identified common mental illnesses (schizophrenia, depression and bipolar disorder) as being such. However, only about 1 in every 2 respondents felt confident talking about mental illness with patients and 6 in every 10 knew what advice to give a friend with a mental health problem. Only 1 in every 3 respondents considered that the university training was adequate. These findings, among others, suggest that the current training provision (a lecture series) within the School of Pharmacy is potentially not enough to adequately prepare future pharmacists for practice. Similarly, Aaltonen and colleagues³⁰ investigated

perceived barriers among pharmacy students in relation to providing medication counselling for people with mental health disorders (in Australia, Belgium, Estonia, Finland, India and Latvia; n=649 respondents) and concluded that more work is needed within pharmacy education programs. Furthermore, in this current study, some misconceptions exist (in relation being able to tell mentally ill patients apart from others). In light of this, the authors consider that QUB teaching should be reviewed and evidence-based interventions explored.^{16,17,31-33}

The study has several weaknesses. The research was only conducted within one year group at one school of pharmacy and therefore the findings are not generalizable. It is also possible that attitudes could change depending on when the study was conducted in the semester (for example, knowledge of mental health conditions could be better after revising for a clinical examination than beforehand and attitudes might change after working in practice, as has been reported previously for pharmacy students²⁰).

CONCLUSION

Many of these future pharmacists appeared to have appropriate attitudes towards mental health and people with mental health conditions. Gender seemed to have very limited influence on attitudes. However, there was a lack of confidence around advice provision to friends and patients and level of dissatisfaction with the current training provision. The reluctance to seek medical help if they ever developed a mental illness probably mirrors the view held by many members of the general public, but is perhaps surprising given these students are future healthcare professionals.

The work adds to the field and provides us with a timely opportunity to reflect on current teaching and make changes to our educational practice. From the findings, it seems that our mental health education is not at an appropriate level to adequately prepare these students for practice. Additionally, this study should provide useful baseline data for other schools of pharmacy in the UK and potentially beyond. Future research should focus on an exploration of whether having personal mental health

issues subsequently affects advice provision to patients and also evaluate the impact of introducing specific mental health awareness training into the program.

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- 14

Table 1 Respondents' Views on Various Attitudinal Statements Relating to Mental Illness (N=97, unless otherwise stated)

| | Agree strongly (5) | Agree slightly (4) | Neither Agree nor Disagree (3) | Disagree slightly (2) | Disagree strongly (1) | Interpolated median |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|---------------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|
| | n,% | n,% | n,% | n,% | n,% | |
| There is something about people with mental illness that makes it easy to tell them apart from normal people (n=96) | 2 2% | 19 20% | 17 18% | 30 31% | 28 29% | 2.2 |
| Mental illness is an illness like any other | 59 61% | 19 20% | 1 1% | 8 8% | 10 10% | 4.7 |
| Virtually anyone can become mentally ill | 72 74% | 18 19% | 2 2% | 2 2% | 3 3% | 4.8 |
| We need to adopt a far more tolerant attitude toward people with mental illness | 57 59% | 32 33% | 4 4% | 2 2% | 2 2% | 4.7 |
| People with mental illness are a burden on society | 2 2% | 5 5% | 9 9% | 17 18% | 64 66% | 1.3 |
| Increased government spending on mental health services is a waste of money | 3 3% | 2 2% | 3 3% | 19 20% | 70 72% | 1.2 |
| People with mental illness should not be given any responsibility | 2 2% | 4 4% | 13 13% | 30 31% | 48 49% | 1.5 |
| People with a history of mental illness should be excluded from taking public office (n=96) | 4 4% | 8 8% | 13 14% | 31 32% | 40 42% | 1.8 |
| I would not want to live next door to someone who has been mentally ill | 1 1% | 13 13% | 15 15% | 35 36% | 33 34% | 1.9 |
| As far as possible, mental health services should be provided through community based facilities | 39 40% | 45 46% | 11 11% | 2 2% | 0 0% | 4.3 |
| People with mental health problems should have the same rights to a job as anyone else | 38 39% | 42 43% | 10 10% | 5 5% | 2 2% | 4.3 |
| If a friend had a mental health problem, I know what advice to give them to get professional help | 21 22% | 39 40% | 18 19% | 18 19% | 1 1% | 3.8 |
| Medication can be an effective for people with mental health problems | 33 34% | 50 52% | 7 7% | 6 6% | 1 1% | 4.2 |
| Psychotherapy can be an effective for people with mental health problems | 59 61% | 34 35% | 3 3% | 0 0% | 1 1% | 4.7 |
| Most people with mental health problems go to a healthcare professional to get help | 14 14% | 19 20% | 19 20% | 39 40% | 6 6% | 2.7 |
| As a future healthcare professional, I feel confident about discussing mental illnesses with patients | 20 21% | 35 36% | 18 19% | 18 19% | 6 6% | 3.7 |
| The university training I have received on mental health has been satisfactory | 13 13% | 22 23% | 30 31% | 26 27% | 6 6% | 3.1 |